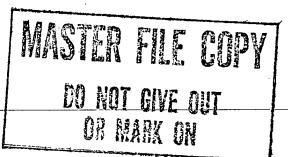


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Cuba: Patterns and Prospects of Soviet Aid

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An Intelligence Assessment

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ALA 83-10180X SOV 83-10198X November 1983

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Cuba:	Patterns	s and	<b>Prospects</b>
of Sov	iet Aid		

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An Intelligence Assessment

This paper was prepared by	Office of	25 <b>X</b> 1
African and Latin American Anal Office of Soviet Analys	·	25X1
coordinated with the Directorate of	f Operations.	25 <b>X</b> 1
Comments and queries are welcon directed to the Chief, Middle Ame	<del>-</del>	
Division, ALA,		25 <b>X</b> 1

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November 1983

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	Cuba: Patterns and Prospects of Soviet Aid	25 <b>X</b> 1
Key Judgments Information available as of 15 October 1983 was used in this report.	Soviet official assistance to Cuba—which currently \$4.5 billion annually in soft currency trade subsidia and is equivalent to over 30 percent of Cuba's real or sign of stimulating the sort of development surge the Moscow are looking for. Indeed, during the period of annual economic growth of 3.4 percent was consider percent average of non-OPEC LDCs, and Cuban of faster since. Moreover, Havana's hard currency deleabout 140 percent during 1976-80—nearly the same OPEC LDCs, even though Cuba was not forced to Although Havana's protected terms of trade with Shave allowed it to perform slightly better than non-1980, the significance of Soviet aid to Cuba has shower the period. Plunging revenues from sugar salest particularly bad this year because of a poor harvest improvement in depressed world prices—coincided Western financial institutions of 35 percent of their the Cuban National Bank. This combination of every slash its purchases from the West by more than 35 even more dependent on imports from Moscow—and currency debt.  Cuba's convertible currency position will improve st two years as sugar production recovers. On the basis ba's hard currency import needs and debt service rewe judge that Havana will need to reschedule its defalling due in both 1984 and 1985 just to meet its requirements from the West.  Moscow has made it clear to Havana that there are and we believe the rate of growth of Soviet aid to Cothe next two years in accordance with the establish plans on which it is based. In addition, we believe I more accountability for the use of its aid.	es and project support butput—still shows little hat both Havana and 1976-80 Cuba's average erably below the 4.7- htput has not grown any but levels increased by he as the average of non- finance oil imports.  Soviet Bloc countries OPEC LDCs since harpened considerably hat to the West— hand only slight with the withdrawal by he short-term deposits in hents forced Havana to hents forced H

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	We expect Fidel Castro—consistent with his past patterns in dealing with	
	crisis—to try to meet Soviet demands for better economic performance by more draconian measures at home. The efficiency of the Cuban security	,
	forces precludes the development of organized opposition in response to increased consumer austerity. Dissatisfaction is likely to be expressed in	
•	passive ways such as absenteeism and reduced labor productivity. Crime and sabotage may also increase, but such actions will be quickly and	05.
	Severely repressed.	25X1
	Castro's deepening dependence on the Soviet Union is likely to cause the Cuban leader to work even harder to enhance Cuba's political and military value to the USSR. We believe Havana will become even more willing to	
	act aggressively in Moscow's interests.	25X1
	Cuba's heavy dependence also places narrow limitations on Castro's ability to act independently in foreign policy matters. For example, should the USSR judge that Cuba's actions in Central America were inimical to	
	Moscow's interests at any given time, the Cuban leader would have no choice but to modify his tactics.	25X1
	What we believe most likely to emerge from these various countervailing forces is a set of accommodations that will result in:	
	<ul> <li>Slowly falling per capita aid from the Soviet Union to Cuba.</li> <li>Cuban growth that will continue to be largely determined by the</li> </ul>	
	<ul> <li>production and world price of sugar.</li> <li>Sustained Cuban difficulties in servicing debt to Western creditors.</li> <li>A somewhat greater presence of Soviet technical and economic advisers</li> </ul>	
	in Cuba as the result of a moderate shift in emphasis from subsidies to project aid.	25 <b>X</b> 1
	We believe that these accommodations will serve both Havana and	
	<ul> <li>Moscow:</li> <li>As long as Castro's position is not endangered by a sharper economic downturn than we now foresee, we believe he will continue the march of his political revolution.</li> </ul>	
	<ul> <li>As long as Moscow can be assured that it will continue to derive significant political and military benefits from its preeminent Third</li> </ul>	
	World client, we judge that it will not slash its total trade and aid to Cuba.	25 <b>X</b> 1

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			25 <b>X</b> 1
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	Should a severe economic crisis or critical material Cubans, we believe that the Soviet Union would tanecessary to redress Havana's immediate problems. larly likely if the crisis were brought about by naturimposed by the West.	ke whatever steps were  This would be particu-	
	The implications for the United States in this set of We believe that continued stagnation of the Cuban pressure on the Castro government to initiate anoth Meanwhile, however, Cuba's situation provides a wopportunities for the West in such themes as Havan iness, growing popular discontent on the island, the totalitarian nature of the government, and—genera the Cuban revolution in political and economic terr	economy will increase her refugee exodus. yealth of propaganda ha's lack of creditworth- need for tightening the lly—the clear failure of	
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## **Appendixes**

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# Cuba: Patterns and Prospects of Soviet Aid

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#### Introduction

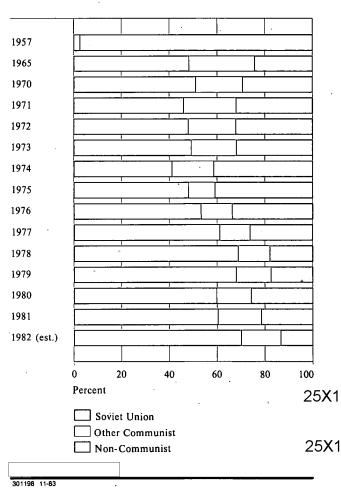
One of the goals of Fidel Castro's revolution—to make the Cuban economy independent of foreign powers—has become increasingly distant after 25 years of his rule. In 1958, for example, 70 percent of Cuba's trade was with the United States; today, the USSR accounts for the same portion. Investment, once supplied primarily by private US residents, now comes mostly from the USSR. In addition, there are several thousand Soviet economic advisers and technicians on the island, directly involved in day-to-day economic management. Cuba's deepened economic dependence on the USSR, however, is most evident in its need for direct aid: whereas US economic aid to Cuba in 1958 was equivalent to less than 1 percent of national output, Soviet economic aid in 1982—valued at about \$4.6 billion—corresponded to somewhat more than 30 percent of Cuba's real output. Overall, this aid—comprising trade subsidies and development assistance and totaling nearly \$29 billion since 1960—has increased significantly since 1974, becoming virtually the only economic assistance Cuba now receives. Without it, Havana would be hard pressed to meet even basic consumption and investment needs.1

This paper examines the characteristics of Soviet aid, its importance to the Cuban economy, and the prospects for future assistance. The paper also considers the effect on the Cuban economy of a stagnation in aid in the 1980s and the impact on Havana's foreign policy should Soviet assistance indeed level off.

#### The Soviet Aid Record

Cuba depends on the Soviet Union for about 70 percent of its total trade. Moscow supplies Havana with nearly all of its crude petroleum and petroleum

# Figure 1 Cuba: Share of Total Trade, by Major Area



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products, grain, lumber, and much of its industrial, agricultural, and transport equipment. In turn, Cuba exports half its sugar crop as well as the bulk of its nickel and citrus production to the USSR. Nearly all of this trade is conducted in soft currency through a bilateral clearing account.

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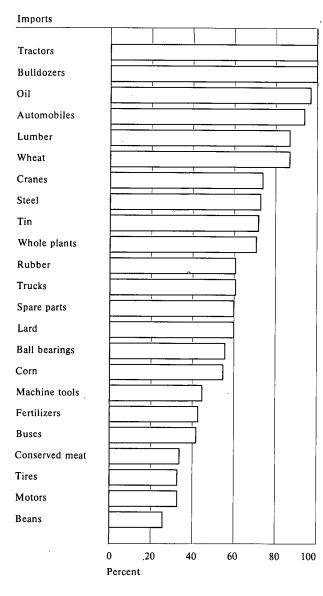
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In assembling and producing the economic data presented in this assessment, we relied primarily on official Soviet and Cuban data. In addition, we made various assumptions concerning key commodity markets.

Figure 2 Cuba: Imports From USSR as a Percent of Cuban Consumption, 1980



Since the mid-1970s Soviet economic aid to facilitate this commerce has consisted primarily of Moscow's paying artificially high prices for Cuban goods while pricing its exports to Cuba below world market levels.<sup>2</sup> These subsidies represent implicit grants, allowing Cuba to reduce its trade deficit by increasing the value of key exports and decreasing the cost of some imports. Together they have totaled \$20 billion since 1961, reflecting the differences between Cuban-Soviet trading prices and world prices for sugar, nickel, and petroleum.

Cuba claims—and trade data reported by Havana and Moscow indicate—that the general pricing formula (and basis of subsidies) established in Cuba's current five-year (1981-85) trade agreement with Moscow is indexed in a way that Havana maintains its purchasing power of 1974-75—the period of record world sugar prices and oil prices that averaged \$11 per barrel.³ In 1982, for example, the USSR paid over five times the world market price—about 45 cents per pound—for Cuban sugar. In addition, Moscow charged Havana only about three-fifths of the OPEC benchmark price for oil.

We know from Soviet and Cuban trade data that before the rise in world nickel prices in 1980 Moscow also paid preferential prices for Cuban nickel. The Soviet price paid in 1980, however, was below the world market price. The trade data available for 1981 and 1982 are insufficient to determine what price the USSR paid. Because world market prices have remained high, we assume that the subsidy, if any, was borne by Havana in 1981 or 1982.

<sup>2</sup> For a discussion of Soviet military aid, see appendix A.

<sup>3</sup> This means that for every \$1 per barrel increase in the price Moscow charges Havana for its 200,000 b/d of oil imports, the USSR will increase the price it pays Cuba for its annual 3.5 million metric tons of sugar imports by 1 cent per pound. The price charged Cuba for its oil imports from the USSR is based on the CEMA formula—a moving average of the world price of oil over the previous five years

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Table 1
Soviet Assistance Delivered to Cuba a

Million US \$

-	Avera Annua 1961-		1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	Total 1961- 82	1983 ь
Development aid c	225	450	565	430	295	150	185	230	320	460	830	1,415	975	8,555	1,000-1,100
Trade subsidies	102	120	49	181	43	914	1,384	2,040	2,626	2,718	2,633	3,023	3,586	20,337	2,944-3,460
Sugar d	102	51	0	71	-408	577	989	1,638	2,427	2,324	1,165	1,366	2,580	13,800	2,644-3,160
Petroleum c	0	42	27	62	411	310	374	378	164	381	1,480	1,657	1,006	6,292	300
Nickel d	0	27	22	48	40	27	21	24	35	13	-12	. ,0	0	245	0
Total economic aid	327	.570	614	611	338	1,064	1,569	2,270	2,946	3,178	3,463	4,438	4,561	28,892	3,944-4,560

<sup>&</sup>lt;sup>a</sup> Based on official Cuban and Soviet trade data.

market value. The difference is considered a grant and not subject to repayment. Sugar subsidy for 1983 is based on 3-3.5 million tons volume, a Soviet price of 50 cents per pound and an average world price of nine cents to 10 cents per pound.

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Moscow also provides Cuba—both directly and through Cuba's participation in CEMA—materials. equipment, and advisers for projects relating to export development and import substitution. This aid is extended in the form of long-term credits (up to 25 years) with grace periods as long as 10 years and at interest rates of no more than 4 percent. According to a Soviet official, over 200 projects and enterprises were constructed or expanded during Cuba's First Five-Year Plan (1976-80) through Soviet assistance. According to the official—as well as to Soviet trade statistics—this aid amounted to 1.2 billion rubles, or about \$1.7 billion during the period. We estimate that plants built or modernized with Soviet participation since Castro took power in 1959 account for 100 percent of the output of sheet metal, 95 percent of steel, 50 percent of fertilizers, and 40 percent of electric power.

In addition, that part of Cuba's annual ruble trade deficit with the USSR not covered by development project credits is financed on favorable terms. The determination of the amounts to be financed in this way apparently occurs during both annual and five-year bilateral trade negotiations. Cuban officials have indicated that these credits are to be repaid over 15 to 17 years, including a five-year grace period, at zero interest.

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Overall development assistance—project aid and trade deficit financing—has totaled nearly \$9 billion since 1960, according to Cuban and Soviet trade data. About 40 percent of the total has accrued since 1979, owing partly to increased deliveries for project aid but

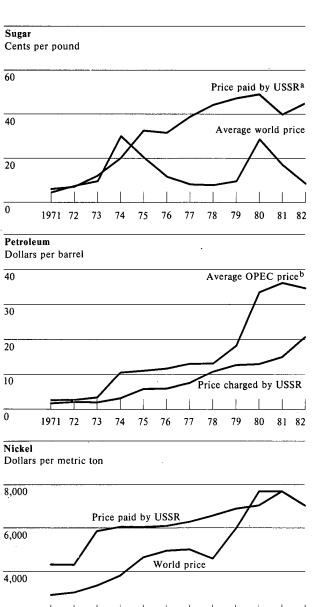
<sup>&</sup>lt;sup>b</sup> Projected.

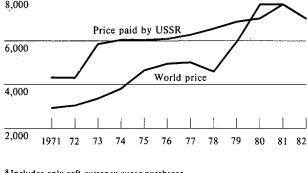
<sup>&</sup>lt;sup>c</sup> Based on (a) estimated balance-of-payments aid necessary to cover Cuban trade deficits with the USSR, (b) Cuban purchases of capital goods from Moscow, and (c) public statements by Cuban and Soviet officials concerning the amount of development aid extended. This aid is repayable but terms are highly concessional. Projection for 1983 is based on preliminary trade data.

d Sugar and nickel subsidies are estimated as the difference between the price Moscow pays for these commodities and their world

<sup>•</sup> The petroleum subsidy reflects the difference between the value of petroleum purchased from the USSR and the value of these imports at world market prices. It is considered a grant and not subject to repayment. The projection for 1983 assumed 200,000-b/d volume, a price to Cuba of \$25 a barrel, and a world price of \$29 per barrel.

Figure 3 Cuba: Subsidized Versus World Market Prices



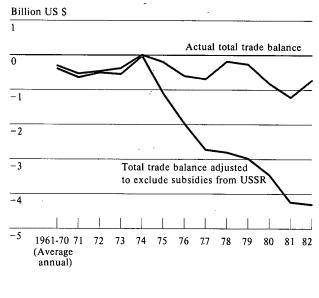


a Includes only soft currency sugar purchases.

b Based on crude product ratio of 60 to 40.



## Figure 4 Cuba: Total Trade Balance Adjusted for Soviet Price Subsidies



primarily to the failure of Cuba's soft currency. exports to keep pace with its imports from the USSR.4

In addition to these forms of aid, the Soviet Union has helped alleviate Cuba's financial pressures in dealing with the West:

• One way it has done this is by purchasing some sugar outside the protocol and other, unspecified goods for hard currency.5

<sup>4</sup> The portion of this assistance that accrued before 1973—about 3.4 billion-was rescheduled by the USSR in December 1972. Moscow terminated all interest charges and postponed initial repayment until 1986.

<sup>5</sup> In 1982 Cuban earnings from these sources totaled over \$500 million, or one-third of the country's total foreign exchange earnings, according to Cuba trade data. Of this amount, \$300 million was for sugar. These hard currency sugar purchases apparently are negotiated ad hoc depending on the size of the Cuban harvest and Cuba's convertible currency requirements. We believe that Havana otherwise would have been unable to find hard currency markets for most of this sugar, in the face of declining global consumption and rising world production.

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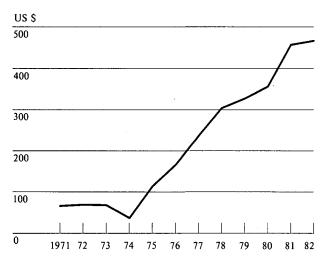
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Figure 5 Cuba: Per Capita Soviet Economic Assistance



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 Another way Moscow has eased Havana's hard currency constraints is by intermediating its purchases. Thus, Cuba receives over 1 million tons of grain annually from Canada, with Moscow paying Ottawa hard currency but charging Cuba soft currency, saving Havana \$200-300 million a year.

Without these direct and indirect cash infusions, Cuba, in our view, would have run up deficits during 1981 and early 1982 that probably would have required rescheduling its convertible currency debt months before the actual request in August 1982.

Despite the large scale of all this aid, the Cuban economy was not able to grow faster than other non-OPEC LDCs, which achieved an average annual real growth of 4.7 percent for the 1976-80 period compared to our estimated 3.4 percent for Cuba. Moreover, Cuba's hard currency debt increased by about

<sup>6</sup> In 1981 Cuba received about \$165 per person in official development assistance from the Soviet Union, Eastern Europe, and the West, or about six and a half times the amount received by the average middle-income developing country

140 percent over the same period—nearly the same as the 145-percent average of non-OPEC LDCs financing oil imports. We believe that the centrally planned economy and low worker productivity were the main factors behind Havana's lag.

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#### The 1981-83 Watershed

Because about 80 percent of Cuba's trade is with Soviet Bloc countries where its terms of trade are protected, Havana was not affected as negatively as other LDCs by the drop in commodity prices after 1980. As a result, Cuban growth for 1981-83 is expected to average 2.3 percent compared to about 1.2 percent for non-OPEC LDCs. Nevertheless, Havana was not totally sheltered from international market and financial conditions during this period, which worked to deteriorate its economic dealings with the West and make Soviet aid increasingly important.

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Cuba's current economic downswing began in late 1980 with the sharp fall in the world price of sugar— 25X1 the source of over half of Havana's nard currency export earnings. Constrained by export restrictions imposed by the International Sugar Organization, export obligations to soft currency customers, and the size of its harvest, Cuba was not able to increase the volume of world market sugar sales enough to offset the 70-percent decline in prices between 1980 and 1982. Increased hard currency purchases for sugar by the USSR and China and earnings from Havana's other major sources of foreign exchange—nickel, seafood, tobacco, and tourism—did not fill the gap. 25X1

At the same time, interest payments on debt increased by over 50 percent from 1979 to 1982, and many of Cuba's requests for new credits were turned down as lenders became more wary about Third World and Communist countries. Moreover, in 1982 international bankers, seeing vigorous US lobbying against

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Table 2
Soviet Hard Currency Flows to Cuba a

Million US \$

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	Average Annual 1961-70	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	Total 1961-82	1983 b
Total .	55	62	69	73	123	601	343	546	290	356	375	703	773	4,864	450
Soviet sugar purchases	0	0	0	0	0	424	159	223	126	134	0	168	291	1,525	0
Grain/flour exports	55	62 .	69	73	123	174	173	216	133	213	234	319	266	2,605	250
Other c	0	0	0	0	0	3	11	107	31	9	141	216	216	734	200

a Based on Soviet and Cuban trade data.

lending to Cuba, withdrew over \$500 million of the short-term deposits in Cuban banks, or 35 percent of the 1981 level.

To deal with these changes, Havana slashed its imports from the West by about 40 percent from 1980 to 1982 and cut other convertible currency expenses such as embassy budgets. These measures proved insufficient and domestically costly, however, as growth dropped to an estimated 1.4 percent in 1982 from 5.4 percent in 1981, largely due to the reduction in imported inputs vital to such basic industries as steel and construction.

Lacking sufficient inflow of funds, the Castro government drew down its foreign exchange reserves by 75 percent between 1981 and mid-1982 to cover immediate financial obligations according to Cuban statistics released to its creditors. With reserves sufficient to cover only six weeks of imports, Havana requested a rescheduling of its medium- and long-term debts in August 1982. Accordingly, Cuba reached an agreement in March 1983 with its government creditors that provided for the rescheduling of 95 percent of the principal due on its medium- and long-term debt from September 1982 to December 1983 (about \$400 million) according to open sources. An agreement for

rescheduling similar debt with commercial banks has been reached, but signing has been delayed, according to press reports, by technical problems concerning short-term debt.

Even with the payments relief provided by the debt rescheduling, Havana's economy remains troubled this year. Based on partial data from Cuba, we believe that national output will essentially stagnate this year. Heavy rains and high winds substantially damaged the important sugar and tobacco crops as well as many vegetable crops grown for domestic consumption. Havana probably has benefited somewhat from the slight rise in sugar prices this year, but not enough to offset the loss of an estimated 1 million tons (from the crop in 1982 of 8.2 million tons) due to weather damage. Moreover, it has been forced to expend hard currency to purchase some sugar on the world market to meet its contract obligations, according to Western trade publications.

al due on its medium- and long-term debt from
iber 1982 to December 1983 (about \$400 mil-

b Projected.

c As reported in Cuban trade data, not further specified.

#### The Institutionalization of Dependence

The calamitous drive to produce 10 million tons of sugar in 1970 marked the final episode in Fidel Castro's gamble that the combination of a spectacular economic performance and guerrilla victories in Latin America would enable him to fend off domination by the Soviet Union. With the economy in a shambles and armed struggle discredited, the Cuban leader—who was ideologically committed to Communism, and vehemently opposed to Western "imperialism"—had no choice but to accept the conditions of survival offered by Moscow—basic conformity with Soviet principles in economics, ideology, political organization, and foreign policy.

Havana's efforts to reverse the cooling trend in relations with Moscow began in the area of foreign policy in 1968 following the Guevara debacle in Bolivia in the previous year. After the 1970 harvest, however, this limited effort broadened into a major overhaul of Cuba's institutions and international behavior. The principal steps included:

- The establishment, in December 1970, of a Cuban-Soviet Commission of Economic, Scientific, and Technical Collaboration, which became an instrument for strong Soviet influence over Cuban economic policy formation.
- The Cuban accession in mid-1972 to full membership in CEMA.
- The total reorganization in November 1972 of all elements of the Cuban Government.

- The initiation of a new Cuban foreign policy emphasizing normalized state-to-state relations and sharply reducing Havana's support to revolutionary movements.
- Soviet agreement in late 1972 to significantly increase technical and economic aid and to defer Cuba's accumulated debt until 1986.
- The reorganization, from the ground up, of all mass organizations in 1973 and delineation of their functions along Soviet lines.
- The establishment by late 1975 of the Sovietdirected "System for Economic Management and Planning" and the inauguration of Cuba's First Five-Year Plan. The system decentralized management, established financial autonomy for state enterprises, legitimized material incentives, abandoned the reliance on "voluntary" labor mobilizations, and eliminated Castro's infamous crash programs and "special plans."
- The convening in December 1975 of the longpostponed first congress of the Cuban Communist Party and a reorientation of the party's role to correspond with the Soviet and East European models.

The adoption in 1976 of conformed to the letter	f a new constitution, which and spirit of the Soviet
constitutions.	25

#### Other Sources of Aid

Although the USSR is by far Cuba's largest donor, East European countries—through CEMA and bilateral channels—have delivered sizable amounts of soft currency economic aid. Cuban data indicate that Eastern Europe—primarily Bulgaria, East Germany, Hungary, and Poland—provided about \$600 million in development aid and trade credits during 1976-80 and nearly the same amount already during the first two years of the 1981-85 Five-Year Plan. In addition, these countries pay a preferential price for sugar, although not as high as the price Moscow pays. In 1976-80, for example, the average price paid by East European countries for Cuban sugar was 23 cents per pound, amounting to a \$640 million subsidy during this period. Moscow paid an average of 36 cents per pound, while the world market price averaged 13 cents during this time. (The price paid by East European countries, set in five-year trade agreements, remained fairly stable, in peso terms, over the 1976-80 period. The price paid by the USSR has risen annually as the price charged Cuba for its oil imports from the USSR increased.) Based on our projections of world sugar prices and Cuban trade data, we believe that sugar subsidies are likely to be at least as much and probably more during the 1981-85 period.

Hard currency aid from Western nations and organizations is of a much smaller magnitude. Official

development assistance disbursed to Cuba by individual OECD and OPEC countries and multilateral organizations has totaled \$260 million during 1971-81. About half of this amount is allocated through bilateral programs, with Sweden and the Netherlands the largest contributors. Projects funded include training for tourism, equipment for the sugar industry, and laboratory equipment for medical research. The remainder is from various UN agencies. Programs financed include educational development, an experimental paper plant using bagasse (a sugarcane processing byproduct), and renovation of Old Havana. This aid probably will continue to fluctuate, but is unlikely to rise above the \$50 million annual levels of the late 1970s, due to the plight of needier countries elsewhere and the limit of funds available to multinational organizations.

The other major source of external savings for Cuba has been public and private nonconcessionary credits, which at the end of 1982 totaled some \$3.2 billion (30 percent of which consisted of short-term deposits in Cuban banks). This has proved to be a mixed blessing in recent years, as Cuba's interest payments—like those of other LDCs—markedly increased, and access to new funds subsequently dried up.

# **Near-Term Trade and Aid Prospects**

#### **Dimensions of the Problem**

Due to Havana's weakened creditworthiness and its poor sugar and tobacco crops this year, we believe that its hard currency import capacity in 1983 will remain at or below 1982's depressed level of \$760 million. We expect higher sugar earnings to permit an increase in Havana's convertible currency imports in 1984 and 1985, perhaps to \$1.1 billion by 1985 but still below yearly purchases worth \$1.3-1.4 billion during 1980 and 1981. Havana, therefore, will become increasingly dependent on soft currency imports to generate any growth through the mid-1980s.

The volume of Cuban exports to the USSR and Eastern Europe will probably rise somewhat after sugar production recovers and a new nickel plant comes on stream in early 1984.8

Nevertheless, the overall value of Cuban sales, even with preferential sugar prices, is unlikely to increase enough to offset growing import needs. Thus, Soviet

Havana's development plans call for production of 10 to 10.5 million tons of sugar in 1985. Last year's harvest yielded 8.2 million tons. The crop this year probably will be limited to about 7.2 million tons because of the storm damage and adverse weather that delayed cutting during the peak of the harvest.

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Table 3

Cuba: Aid From Non-Soviet Sources a

Million US \$

Sources	1976	1977	1978	1979	1980
West					
Official net development assistance	35.7	46.1	48.7	48.8	32.0
Bilateral	26.0	29.7	17.4	33.9	11.1
Multilateral	9.7	16.4	31.3	14.9	20.9
Eastern Europe	110.0	295.0	314.0	272.0	246.0
Sugar subsidy	107.0	164.0	176.0	203.0	-11.0
Development aid	3.0	131.0	138.0	69.0	257.0

<sup>a</sup> Aid from Eastern Europe is soft currency; aid from the West is hard currency.

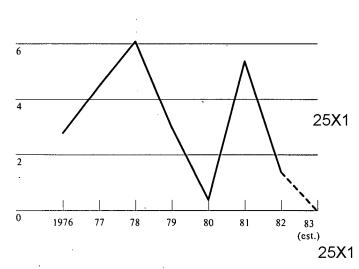
Bloc financing of Cuban trade deficits will need to remain at least on the scale of the past three years (over \$1 billion) merely for Havana to maintain its 1982 volume of imports.

## Moscow's Attitudes

For the most part, the levels of trade and aid between Cuba and the Soviet Union through 1985 have already been established as part of the five-year trade agreement. Moscow is likely to meet the commitments set in this agreement even if Cuba's exports fall short of plan because of weather-related crop problems. At the same time, because Moscow incorporates commitments made in its five-year trade agreements in its own domestic production planning process, we doubt Moscow will commit itself to supplying Cuba goods beyond those offered in the 1981-85 trade agreement or otherwise become more generous. More likely—unless Cuba's economic position experiences more damage by natural disaster or sanctions imposed by the West-Moscow will look for ways to make Cuba a less expensive client.



Percent growth



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# Changes in Scope and Form

We expect Moscow's soft currency economic assistance in 1983 (as presented in table 1) to remain high—about \$4-4.5 billion, or the same as last year. We believe that this aid probably will decline over the following two years to the \$3-4 billion range, largely due to the cuts in the petroleum subsidy. In addition, Moscow's hard currency transactions with Cuba will drop this year, but are likely to return to the \$700-800 25X1 million range in 1984 and 1985.

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Cuban officials maintain in public speeches and documents that the USSR has "guaranteed" 220,000 to 240,000 b/d of oil during 1981-85, but available evidence indicates that deliveries have ranged from 200,000 to 210,000 b/d in 1981 and 1982 and are following a similar pattern this year. We believe that this volume will continue through 1985, but that the implicit subsidy will decline dramatically during the period, because of the pricing formula, which is based on a moving average of the world price of oil over the previous five years. Thus, the steep OPEC increases since 1979 are still working their way through the formula. This year the subsidy is projected to be about \$300 million, compared to last year's \$1 billion. Moreover, if world oil prices remain at or near the current level, the oil subsidy should approach zero by 1985 because the moving average price charged by the USSR will become roughly equivalent to the world price.

Cuban trade data indicate that Soviet hard currency purchases of goods other than sugar will continue at the 1982 level of \$200 million annually through 1985. These purchases fluctuated widely during 1975-79 but have been consistently high since 1979. While we have no evidence to indicate what goods are included in this account, at least part could represent credit for petroleum that was not consumed by Cuba.

the Cuban press, reported that a 1981 agreement offered Cuba convertible currency credits for oil saved from its protocol allotment. This Soviet incentive, unique to its trade with Cuba, probably represents an effort to lessen Havana's energy dependence without imposing the hardships of abrupt declines in oil shipments. Recent public statements by Cuban officials indicate that they plan to earn as much as \$200 million a year between now and 1985 by using oil sparingly.

Moscow probably will continue to purchase some sugar from Cuba with convertible currency. A poor Cuban harvest this year, however, will keep the amount low at best. As Cuba's sugar output recovers in 1984 and 1985, Moscow is likely to purchase on the

order of 500,000 tons annually. Nevertheless, the Soviets apparently increased the protocol-stipulated amount of Cuban sugar deliveries to 3.5 million tons (from about 3 million) this year and may increase it again during negotiations for the 1986-90 trade agreement.

Despite the poor crop this year, we estimate that the value of the sugar subsidy will increase based on (1) an increase reported by the US Interests Section in Havana—of about 5 cents per pound—to 50 cents per pound in the price Moscow pays and (2) little improvement in this year's average world sugar price. Beyond 1983, as world—and consequently CEMA—oil prices level off, so in all likelihood will the subsidized sugar prices to which they are linked.

We expect the rate of growth in the volume of grain and flour that the USSR purchases for Cuba to decline over the next few years since it expanded more than five times faster than the population during 1970-82. We believe the Soviets may encourage Cuba to utilize its \$70 million Argentine credit line for corn purchases in order to decrease their own burden.<sup>10</sup>

Preliminary Soviet trade data indicate that its total development aid to Cuba will remain large—between \$1 billion and \$1.1 billion—in 1983. In 1984 and 1985 we expect this aid to remain near this range. Project aid is scheduled to rise by 80 percent during 1981-85 to roughly \$3 billion for the entire period, according to public statements by Soviet officials. In

<sup>10</sup> In the mid-1970s, following Argentina's extension of a \$1.2 billion, six-year credit line to Cuba, the latter imported 100,000 to 200,000 tons of corn annually or 30 to 50 percent of its total imports of corn. In the late 1970s, however, Cuba stopped drawing on the credit line and doubled its imports of corn from the USSR.

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The announcement did not specify the details of the agreement, but we believe that the arrangement is based on the difference between actual oil deliveries and the amount called for in the annual protocol.

<sup>&</sup>quot;Important projects that are being developed with this aid include a nuclear power plant scheduled to become operational in the late 1980s that will decrease Cuba's oil needs by about 10 percent and a new nickel plant that will double Cuba's output.

•		
addition, Cuba's soft currency trade with the USSR is likely to remain in a deficit position—probably on the order of \$500 million annually—through 1985.  According to Cuban data, repayments of this aid will begin to come due in 1985. Though Havana may be able to expand its export production enough to make the \$125 million payment that year, the problem will only become worse in 1986 when the grace period on	Cuba cannot afford to draw upon petroleum reserves for a sustained period of time to make up for decreased deliveries. We do not know Cuba's current refined oil reserves but, even if its oil storage tanks were full, Cuba would need, at current import rates, to almost totally deplete the tanks by 1985 just to bring its annual consumption in 1983-85 up to the 1981 level. We believe fears of a US naval blockade will preclude the tapping of reserves.	25X1 25X1
Cuba's recently rescheduled hard currency debt also expires. We believe Havana is likely to give these latter debts priority to preserve its reputation for honoring commitments to the West, and Moscow probably will again reschedule or perhaps even excuse Cuba's debt.  Economic Impact of Aid Stagnation	We have no evidence that the fall of petroleum imports in 1982 and 1983 has resulted in shortages. Economic activity has been slower during the last two years, however, due to the lack of foreign exchange for vital imports for industry and transportation sectors. Thus, petroleum demand in these sectors—which account for over 70 percent of total oil demand—probably was depressed.	25X1 25X1
The expected decline in total soft-currency Soviet aid in 1984 and 1985 will result in a reduction in the growth of Cuba's imports from Moscow. Besides oil, consumer goods as well as capital goods not connected to certain Soviet-funded projects are the most likely areas for reductions in the rate of increase. Such reductions will have little effect on Cuba's economic activity during those years, but will likely contribute to slower growth beyond 1985 as capital investment	We believe the decline in oil deliveries will be felt in 1984 and 1985, however, as economic growth is expected to pick up—albeit moderately. A new nickel plant is scheduled to come on line during this period, and this alone will increase total oil demand by more than 5 percent. In addition, thermoelectric power plants scheduled to open could raise needs by an additional 3 to 5 percent.	25X1
Because petroleum deliveries are expected to stagnate, Cuba will almost certainly experience slower economic growth despite fuel conservation efforts. The volume of deliveries increased an average 6 percent annually during 1976-80, rose 3 percent in 1981, and dropped 7 percent in 1982. Oil imports thus far in	Based on the regime's past practices, we expect consumers to bear the brunt of any oil shortages through brownouts to homes and industries that produce for domestic consumption and decreased availability of public transportation. Such measures probably would result in a moderate reduction in economic activity, a decrease in living standards, increased worker absenteeism and lower labor productivity.	25X1
1983 are slightly lower than for the same period last year. We believe Cuba requested lower deliveries in order to earn convertible currency for the amount it saved in accordance with the incentive plan Moscow offered in late 1981. We further believe that Havana's	Every attempt would be made to preserve export production and shipment. Sugar is the easiest export to protect since most of its energy requirements are	25 <b>X</b> 1
hard currency needs through 1985 will force it to continue to rely on this source of funds. Thus, we do not expect deliveries to rise to the 1981 level again during this five-year plan even though energy de-	the island's oil storage capacity is about 15 million barrels. Fixed lid tanks prevent a determination of the actual amount stored at any given time, however.	25 <b>X</b> 1
mands will increase as a number of new factories open.		25X1

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satisfied by bagasse—a byproduct of sugarcane milling. Tobacco harvesting and processing also uses only minimal amounts of petroleum. The export industries most dependent on oil are nickel and seafood. Moreover, all exports depend on the cargo transportation sector, a heavy petroleum user.

#### **Cuban Expectations and Preparations**

Soviet economic aid will decline in coming years. Vice President Carlos Rafael Rodriguez, for example expected Soviet economic difficulties to lead to a diminution or cessation of subsidies within the next few years. In addition, during a recent meeting in Moscow with US Embassy officials, Soviet specialists on Latin America stated that "Cuba has got to stand on its own two feet." We believe, on the basis of this reporting and the history of Moscow's aid relations with Havana, that Cuban officials probably are receiving a similar message directly from Moscow.

Cuban officials reportedly are already concerned that

The prospect of a leveling of aid and stagnating or decreased petroleum deliveries is likely to renew debate within the Cuban leadership over economic policy, especially over the issue of motivating the labor force over the next several years. In our judgment, pragmatists and technocrats will press again for material incentives, reducing selected restrictions on private enterprise activities and greater autonomy for enterprise managers. Such policies, which go against the ideological grain of the dominate "hardliners," are, however, unlikely to be adopted without explicit urging from the Soviets.<sup>13</sup> Havana has implemented a few economic liberalization measures in recent years,

"The so-called hardliners are primarily ex-guerrillas from the struggle against Batista. More than three-fourths of the Politburo fall into this category. They are politically unsophisticated, tend to view the world in black and white terms, and are intensely anti-American. Moderates in the hierarchy include veterans of the pre-Castro Communist Party and a younger group of "technocrats" who are largely responsible for the daily operation of the economy. The "old Communists" are prone to represent Soviet interests in policy discussions and have a more solid background in economic and political administration. Because of their advanced age, however, they are steadily fading as a political factor.

and we believe these ventures were pushed by the pragmatists. The most important of these—the farmers' free markets—were curtailed after about two years despite their evident success in stimulating productivity. Cuban Communist Party newspaper accounts indicated that ideological purists in the regime judged that the negative political and "moral" effects—the rise of "capitalist" behavior, for example—outweighed the economic benefits.

Although Fidel Castro is, in our view, more pragmatic and sophisticated than the purists, he generally sees any movement toward economic liberalization as a necessary evil that serves only to resolve short-term problems. Like his hardline colleagues in the hierarchy, he fears that such reforms will lead to a popular desire for additional liberalization and a decentralization of economic decision making. For these reasons, as long as Fidel Castro remains in power, significant economic liberalizations are unlikely in Cuba unless the USSR presses hard for their implementation—an action we believe is unlikely in the next couple of years. In Castro's mind, motivation of the population must be accomplished through verbal exhortation, ideological education, and repression. In periods of economic difficulty, he has sided with the hardliners who assert that tough measures are necessary to achieve improved productivity and to encourage proper "socialist behavior."

The retreat on economic liberalization such as the restrictions placed on the farmers' free markets has been followed by other signs that the Castro regime intends to pursue the hardline approach over the next several years. In mid-August, the Cuban party newspaper described Moscow's emphasis on labor discipline to improve Soviet productivity. According to the US Interests Section in Havana, the story could be a warning that the Castro regime will crack down on absenteeism and other worker misdemeanors. The government also recently announced that it would begin enforcing a 1977 law—ignored by the authorities until now—to prevent the illegal occupation of vacant government-owned buildings and other property in Havana. The US Interests Section sees thisand we agree—as a move targeted at individuals living illegally in Havana and engaging in black market or criminal activities.

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Soviet economic support to Cuba as presented in table 1 far exceéds the amount Moscow supplies to all other Third World client states combined. Soviet economic assistance to Angola, Ethiopia, Mozambique, and Vietnam combined totaled about \$1.2 billion in 1982, for example, or only 25 percent of the amount provided to Cuba. Moreover, the amount of economic aid provided and the cost of supporting Cuba have continued to increase while Soviet economic support for Eastern Europe has declined moderately.

#### Figuring the Costs of the Aid

Because the calculation of aid as presented in table 1 combines transfers of resources under economic assistance programs and the opportunity costs of price subsidies, the actual burden of this aid on the Soviet Union is difficult to evaluate precisely. We have constructed, therefore, a method of examining the costs to the USSR of supporting the Cuban economy (see appendix B). This approach focuses on the value of net exports to Cuba, taking into account technical services, military aid, and other items not included in the Soviet trade account. Soviet exports and imports were revalued to roughly approximate world prices to take account of the price distortions in Soviet-Cuban trade. The revalued trade surplus represents the opportunity costs to Moscow of supplying Cuba with materials that could be sold elsewhere. In 1982, for example, we estimate that the USSR was forgoing \$2.7-4.2 billion in net hard currency earnings in its annual trade with Cuba. This sum was equivalent to 8 to 12 percent of total Soviet hard currency earnings in that year.

#### Dickering Over Amounts

We have little information on how annual and fiveyear negotiations for trade and aid are conducted. From what we know about pricing and planning policies, however, we believe that there is more flexibility in some forms of aid than in others.

We believe that the pricing formulas that determine the levels of the trade subsidies are the most rigid form of aid, and therefore least likely to be influenced by the state of relations—which at any rate fluctuate in a narrow range—between Havana and Moscow at the time of negotiations. The basic pricing formula was established in the mid-1970s and links the price the USSR charges for its oil exports to Cuba to the price it pays for its sugar imports from Cuba. The price of oil and other Soviet exports to Cuba is determined by criteria established in CEMA.

We judge that the level of development assistance—project aid and financing of Cuba's soft currency trade deficits—Moscow agrees to provide Havana in negotiations is subject, at the margin, to the state of relations at the time of negotiations. The level of this aid is based on the USSR's commitment to maintaining and developing the Cuban economy.

The forms of assistance most likely to be influenced by the relative peaks and troughs in Soviet-Cuban relations are those involving direct hard currency transfers from the USSR to Cuba. These include purchases of sugar for hard currency and granting convertible currency credits for oil that Havana saves. These transfers apparently are not established in plans but negotiated ad hoc and therefore are more subject to change.

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Text: "Andropov, are you sure that the falling 'Russian Satellite is not me?" (Headlines read: "Russian Satellite to fall soon.")

#### Gauging the Benefits to Moscow

In the future, Moscow will continue to look for the kinds of political and military benefits it has derived from Cuba in the past. Havana, for example, has been a valuable ally in assisting Moscow's Third World policies. Cuban military personnel played a key role in preserving pro-Soviet regimes in Angola in 1975-76 and Ethiopia in 1977-78. In addition, Cuban support was an important factor in the Sandinista victory in Nicaragua in July 1979. There are some 60,000 Cuban military and civilian advisers in Third World countries—primarily Africa—where a large-scale Soviet presence might be viewed with alarm by local and Western leaders.

Castro has also promoted the USSR's political position on various international issues. He has been especially aggressive in defending Moscow in the Nonaligned Movement (NAM). This has, on some occasions, imposed a political cost on Havana. For example, Castro's endorsement of the Soviet invasion of Afghanistan undermined his credibility as the then NAM chairman.

In addition, Cuba has and will continue to afford the Soviets valuable military facilities in the Western Hemisphere. Soviet naval reconnaissance and antisubmarine warfare aircraft frequently stage from Cuban airfields to monitor US military activities in the

Cuban ports are used by
Soviet naval vessels for replenishment and repairs
during deployments to the Caribbean region.

As long as Moscow continues to derive these kinds of benefits from Havana, we judge that it will not slash its trade and aid to Cuba. At the same time, however, Moscow has made it clear that there are limits to its economic support. As long as Castro's position is not endangered by a sharper economic downturn than we now foresee, we believe he will continue to provide these benefits and be content to continue the march of his political revolution. Barring major economic disasters aid is therefore likely to remain in a rather narrow range in accordance with pricing formulas and plans.

Cuba's near total dependence on Moscow will have some substantial implications for its foreign policy over the next several years, however. We believe that Castro is likely to work even harder to enhance Cuba's political and military value to the USSR in order to maximize Soviet aid flows and deflect possible demands from Moscow for policy changes. Havana almost certainly will continue to demonstrate strong political support for its patron despite the damage it does to Cuba's credibility among Third World nations. Cuba's slavish defense of Soviet actions in the controversy over the downing of a Korean jetliner this year was a dramatic example of this tendency. Such actions will hamper Cuba's attempts to play on the sentiment that exists in some Western countries-France and Sweden, for example-that calls for closer economic ties with Havana to "wean" Cuba away from the USSR. In Castro's view, however, the island's very survival depends on massive Soviet aid, and the continuation of this aid far outweighs the cost to Havana's image caused by defending Moscow's foreign policy.

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## Indicators of Change in Soviet-Cuban Relationship

There are a number of indicators that can be monitored to determine to what extent Moscow is willing to support the Cuban economy. Direct indicators include:

- The protocol-stipulated volume of oil deliveries set in the next five-year plan.
- The volume of grain the USSR purchases for Hayana.
- The protocol-stipulated volume of sugar set in annual and five-year plans.
- The volume of sugar Moscow purchases for hard currency (when Cuba has extra sugar to sell).
- The amount of development aid granted in the next five-year agreement.
- Moscow's leniency regarding Cuban repayment of debts.

Some events that could indirectly signal a change include:

- Visits to Cuba by high-level Soviet economic officials who do not normally take part in the Soviet-Cuban economic planning process.
- Veiled criticism in Soviet media of Cuban economic performance or foreign policy.
- A shakeup in the Cuban leadership of people dealing with economic policy.

For the same reasons, we believe that Cuba's overseas role will become even more subservient to Soviet foreign policy objectives. For example, should the military situation in Angola deteriorate further, Havana may have little choice but to increase its military participation despite the increasing unpopularity of the policy at home. Similarly, Castro is likely to quickly serve additional Soviet interests, perhaps by sending military personnel or civilian technicians to help new Soviet clients. In addition, the Cuban leader may increase his support to selected leftist groups in the Caribbean, for personal revenge over his setback in Grenada, as well as to support Soviet interests.

Alternatively, Castro's natural enthusiasm for regional interventionist activities could well be bounded increasingly by Soviet interests. Should the USSR judge that Cuba's actions in Central America threaten a military confrontation between Havana and the United States, the Soviets probably would continue to advise the Castro regime to modify its tactics. In the 1960s the Cuban leader ignored Moscow's demands to alter his revolutionary strategies and was able for several years to support guerrilla movements in numerous Latin American nations in spite of strong Soviet criticism. Only when Moscow backed up its 25X1 criticism with cuts in the rate of growth of oil deliveries did Castro moderate his positions. Castropresently critically dependent on Soviet aid—now has little room for maneuver and would have to bow quickly to Soviet dictates. In addition, Castro's ac-25X1 tions are limited by his awareness that he cannot expect Soviet military forces to come to his aid in the 25X1 event he provokes a military confrontation with the United States over Central America.

These limitations, in our judgment, will strongly influence the conduct of Cuban foreign policy. Not only will Castro find it difficult to refuse a Soviet request to provide military support for a pro-Moscow regime in the Third World, he will have to coordinate even more carefully his own foreign initiatives with the USSR. Such coordination most likely will be especially necessary in areas that impact on US sensitivities. As a result, Castro probably will find himself constrained from making autonomous tactical decisions concerning the level of Cuban support to guerrilla organizations in Central America.

In addition, the Cuban leader probably will have to ensure that Cuban support to other guerrilla groups such as the M-19 in Colombia is in concert with Soviet objectives in the area. Moreover, Havana probably will have to take care that its political

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activities in nations such as Mexico, Panama, Venezu-		
ela, and Peru do not cause a backlash against Soviet		
interests in those countries.		25X1
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Because of his unique and close relationship with the		
Sandinista leaders in Nicaragua, we believe Castro		
would go further in acting independently of Moscow		
with regard to that country than on any other foreign		
policy issue, especially if he perceived a danger to the		-
large number of Cuban personnel stationed there.		
Nevertheless, if confronted with strong Soviet pres-		1
sure, he would be forced to acquiesce.		25X1
Implications for the United States		
Castro's deeply held antipathy toward the United		
States over the past 25 years and his dominance over		
Cuban policy demonstrates, in our view, that as long		
as he remains in power, the United States will have		
little direct leverage on Cuban policies and, short of	•	
war, can do little to reduce the military value of Cuba		
to the USSR. On the other hand, Cuba's bleak		
economic outlook will increase the opportunity for the United States to have indirect influence in some		
areas.		OFYA
arcas.		25X1
US demarches to Cuba's official creditors for exam-		
ple, may help to reduce the flow of Western credit to		
Havana or tighten conditions for future reschedulings,		
though some European countries, particularly Spain,		
probably will resist such efforts for various political or		
historical reasons. Propaganda and other actions de-		
signed to undermine confidence in Cuba as a credit		
risk will likely meet increasingly receptive ears with		
commercial bankers.		25X1
In addition, as consumer disgruntlement and econom-		
ic crime increases in Cuba, opportunities for the		
United States to exploit these feelings will be en-		
hanced. Moreover, if—as we expect—the regime re-		
sponds by resorting more frequently to repressive		
measures such as executions of common criminals, its		
image in the Third World can be undermined if		
attention is focused on the blatant and severe human		
rights violations against overt opponents of the gov-		
ernment. Eventually, however, Castro is likely to be		
tempted to export the dissidents as he did in 1980.		051/4
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## Appendix A

## Soviet Military Assistance 14

Cuba receives all of its military equipment, supplies, and advisers from the Soviet Union. According to public statements by Cuban officials, it is supplied free of charge. Neither the Cubans nor the Soviets publish any statistics on the volume or value of these equipment and services, and they actively attempt to conceal them. The value of military aid from the USSR that is listed below is based on estimates of the total tonnage delivered and the cost of some of the major weapons identified. Ships and aircraft delivered in 1982, for example, are estimated to be worth at least \$485 million at current world market prices:

			Million US \$		
1971	40	1977	95		
1972	70	1978	350		
1973	65	1979	260		
1974	60	1980	260		
1975	70	1981	795		
1976	130	1982	940		

(S NF)

The tonnage of Soviet arms deliveries to Cuba in 1982 fell from the 1981 high of 45,000 tons to about 25,000 tons. Shipments of military-associated equipment and spare parts increased substantially, however, bringing the total tonnage of military deliveries for 1982 close to the 1981 figure of 63,700 tons. Preliminary data for the first six months of 1983 suggest that arms are being delivered at about the same pace as last year, but shipments of military-associated equipment have dropped.

Soviet military aid to Cuba provides a visible and concrete affirmation of Moscow's support for Castro and is partially a response to his pleas for more effective weapons to defend against the threat of a US

air attack or naval blockade. The increased level of Soviet military aid has allowed Cuba to modernize significantly its Air Force and Navy since 1975 and has provided Havana with formidable defensive capabilities as well as an improved capability to project military power in the Caribbean region. We believe that the modernization of Cuba's naval and air defense forces will continue over the next several years. The annual volume of arms deliveries, however, probably will be somewhat less than the 1981 peak.

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### Appendix B

# Methodological Notes on Economic Calculations

A useful criterion for assessing the burden of Soviet aid to Cuba on the Soviet economy is the net amount of hard currency foregone by Moscow—that is, what Soviet exports of goods and services to Cuba would have earned if these were sold on world markets minus what Moscow would have to spend in world markets for imports from Cuba. With the exception of some Soviet purchases of Cuban sugar and a few other commodities for hard currency, Soviet trade with Cuba occurs at negotiated prices. Except for sugar, these prices seem to be based on the criteria generally accepted within the Council of Mutual Economic Assistance (CEMA). CEMA prices often differ from world market prices, especially on oil. In addition, the low quality of many Soviet manufactured goods precludes their sale on the world market. Consequently, we have adjusted Soviet trade data in order to reflect what the Soviets could genuinely earn if they could sell on the world market the goods that they trade with Cuba.

In preparing our estimates of the world market value of Moscow's net exports to Cuba for 1979-82, we first examined the value of Soviet merchandise imports from Cuba as reported in official Soviet and Cuban data. The data were disaggregated by major commodity—sugar, nickel, citrus, and other. The last category includes Soviet hard currency payments for imports from Cuba reported in Cuban statistics, but not accounted for in Soviet trade data. These imports were then valued at world market prices, which substantially reduce their value—from nearly \$4 billion at Soviet prices in 1982, for example, to about \$1.4 billion at market prices. Nearly all of the difference is attributed to the preferential price Moscow pays for its Cuban sugar imports.

We performed a similar process on the value of Soviet merchandise exports to Cuba, using official Soviet data. Petroleum, accounting for 30 to 35 percent of Cuban imports (nominal value terms) from the USSR in recent years, is sold to Cuba for concessionary prices. In addition, the USSR supplies Cuba with a

wide range of raw materials including lumber, steel, chemicals, and cotton that can be sold on hard currency markets at or near the price Moscow charges Cuba. Such sales—which account for nearly 25 percent of Soviet exports to Cuba—would have earned Moscow \$800-950 million per year on the world market in 1979-82.

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Approximately 45 percent of the USSR's exports to Cuba consist of finished manufactured commodities, mainly machinery and transport equipment that are not easily marketable elsewhere due to their poor quality by Western standards. To sell these products for foreign exchange would require substantial discounts—by up to 60 percent based on a survey of a handful of commodities for which unit values can be derived—on the prices charged to Cuba. For the purpose of this paper, we estimate that 60 percent of the value of Soviet manufactured exports could find convertible currency purchasers in the long run.

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In the short term, however, the opportunity cost to the USSR of this trade with Cuba would be less. It would take the USSR a considerable amount of time to develop alternative markets and improve the quality of its goods so as to make them salable in the West. Time-consuming negotiations would be necessary to arrange for Soviet construction of large projects similar to those currently being built for Cuba. For illustrative purposes, we assumed that only 25 percent of the value of Cuban imports of Soviet manufactured commodities could immediately find new markets.

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We estimated the shipping costs on Soviet exports to Cuba based on the average 1977-81 ratio of the f.o.b. value of Soviet reported exports to Cuba to the c.i.f. value of Cuban reported imports from the USSR. We believe these freight charges are reasonably comparable to world freight rates, at least over the long run. We assumed that 50 percent of the freight charges could be recovered in hard currency in the short term.

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Table 4
USSR: Net Hard Currency Earnings Forgone in Trade With Cuba

Million US \$

	Nominal Value a						World Market Value					
· · · · · · · · · · · · · · · · · · ·	1979	1980	1981	1982	1983 ь	1979	1980	1981	1982	1983 ь		
Merchandise imports (f.o.b)	3,277	3,187	3,069	3,955	3,855-4,405	940	2,034	1,703	1,375	1,145-1,322		
Sugar	3,118	2,861	2,538	3,417	3,305-3,855	794	1,696	1,172	837	595-772		
Nickel	98	126	256	239	250	85	138	256	239	250		
Citrus fruits	15	21	30	34	40	15	21	30	34	40		
Other c	46	179	245	265	260	46	179	245	265	260		
Merchandise exports (f.o.b)	3,233	3,524	3,829	4,321	4,800-4,900	2,997	4,304	4,807	4,577	4,290-4,350		
Commodities at concessionary prices (petroleum)	884	942	1,181	1,500	1,825	1,265	2,422	2,838	2,506	2,125		
Commodities at or near world prices	807	833	951	945	950	807	833	951	945	950		
Commodities at premium prices	1,542	1,749	1,697	1,876	2,025-2,125	925	1,049	1,018	1,126	1,215-1,275		
Other Soviet exports	590	625	1,190	1,380	1,080-1,290	486	521	872	1,004	840-970		
Shipping costs on exports	290	320.	345	390	430-440	290	320	345	390	430-440		
Technical services	40	45	50	50	50	40	45	50	50	50		
Military deliveries	260	260	795	940	600-800	156	156	477	564	360-480		
Total exports	3,823	4,149	5,019	5,701	5,880-6,190	3,483	4,825	5,679	5,581	5,130-5,320		
Net exports, long-term	546	962	1,950	1,746	1,475-2,335	2,543	2,791	3,976	4,206	3,808-4,175		
Net exports, short-term		,				1,663	1,818	2,683	2,740	2,474-2,681		

a Based on official Cuban and Soviet trade data.

The value of technical services over the long term—what Moscow could receive on the world market for its economic advisers and technicians currently serving in Cuba—was estimated based on what Moscow charges for these advisers elsewhere. It was assumed that, in the short term, none of these services could find hard currency markets in the West. The world market value of military deliveries in the long run is estimated at 60 percent of the nominal value and at zero in the short run.

The extension of the data series into 1983 entailed all of the techniques described above. Projections of Soviet imports from Cuba were based primarily on our estimate of 3-3.5 million tons of sugar at a Soviet price of 50 cents per pound. The estimated range for Soviet exports to Cuba is based on Soviet export data for the first half of the year. A study of past

semiannual export patterns shows no significant deviations between first and second half-year exports; thus, the amount reported was doubled to obtain a projection for the entire year.

The difference between the revalued Soviet exports to and imports from Cuba, for both the short and long term, represents the opportunity costs to Moscow of supplying Cuba with materials that could be sold elsewhere. We estimate, for example, that the USSR could have netted about \$4 billion over the long term in both 1981 and 1982, and about \$2.5 billion in the short term for each of those years if it had not had its commitment to support Cuba. Moreover, we project that the opportunity cost for 1983 will remain about \$4 billion in the long term and \$2.5 billion in the short term.

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Projected.

<sup>&</sup>lt;sup>c</sup> Based on official Cuban trade data only.

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